



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R09-OAR-2021-0078; FRL-8726-02-R9]**

**Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards;  
Arizona; Hayden and Miami Nonattainment Areas**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is determining that the Hayden lead (Pb) nonattainment area (NAA) failed to attain the 2008 Pb primary and secondary national ambient air quality standards (NAAQS or “standards”) by the applicable attainment date of October 3, 2019. The EPA is also determining that the Hayden and Miami sulfur dioxide (SO<sub>2</sub>) NAAs failed to attain the 2010 1-hour SO<sub>2</sub> primary NAAQS by the applicable attainment date of October 4, 2018. As a result of these determinations, the State of Arizona is required to submit by January 31, 2023, revisions to the Arizona State implementation plan (SIP) that, among other elements, provide for expeditious attainment of the Pb NAAQS in the Hayden Pb NAA and the SO<sub>2</sub> NAAQS in the Hayden and Miami SO<sub>2</sub> NAAs by January 31, 2027.

**DATES:** This rule is effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

**ADDRESSES:** The EPA has established a docket for this action under Docket ID No. EPA-R09-OAR-2021-0078. All documents in the docket are listed on the <https://www.regulations.gov> website. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available through <https://www.regulations.gov>, or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information. If

you need assistance in a language other than English or if you are a person with disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

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**SUPPLEMENTARY INFORMATION:** Throughout this document, “we,” “us,” and “our” refer to the EPA.

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## **I. Background**

On May 10, 2021, the EPA proposed to determine that the Hayden Pb NAA failed to attain the 2008 Pb primary and secondary NAAQS<sup>1</sup> by the applicable attainment date of October 3, 2019, based upon monitored air quality data from November 2015 to December 2018.<sup>2</sup> In the May 10, 2021 action, the EPA also proposed to determine that the Hayden and Miami SO<sub>2</sub> NAAs failed to attain the 2010 1-hour SO<sub>2</sub> primary NAAQS<sup>3</sup> by the applicable attainment date of October 4, 2018, based upon monitored air quality data from January 2015 to December 2017. The Hayden Pb and SO<sub>2</sub> NAAs include parts of Gila and Pinal counties and exclude the parts of

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<sup>1</sup> The EPA first established primary and secondary Pb standards in 1978 at 1.5 micrograms per cubic meter (µg/m<sup>3</sup>) as a quarterly average. 43 FR 46246 (October 5, 1978). Based on updated health and scientific data in 2008, the EPA revised the Federal Pb standards to 0.15 µg/m<sup>3</sup> and revised the averaging time for the standards. 73 FR 66964 (November 12, 2008). The EPA established primary and secondary standards at the same level for the 2008 Pb NAAQS. Primary standards provide public health protection, including protecting the health of “sensitive” populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Because the primary and secondary Pb standards are the same, we refer to them hereafter in this document using the singular “Pb standard” or “Pb NAAQS.”

<sup>2</sup> 86 FR 24829.

<sup>3</sup> The EPA first established primary SO<sub>2</sub> standards in 1971 at 0.14 parts per million (ppm) over a 24-hour averaging period and 0.3 ppm over an annual averaging period. 36 FR 8186 (April 30, 1971). In June 2010, the EPA revised the NAAQS for SO<sub>2</sub> to provide increased protection of public health, providing for revocation of the 1971 primary annual and 24-hour SO<sub>2</sub> standards for most areas of the country following area designations under the new NAAQS. 40 CFR 50.4(e). The 2010 NAAQS is 75 parts per billion (equivalent to 0.075 parts per million) over a 1-hour averaging period. 75 FR 35520 (June 22, 2010).

Indian country within the areas. The Miami SO<sub>2</sub> NAA includes parts of Gila County and excludes parts of Indian country within the area.<sup>4</sup>

The proposed rule provided background information on the effects of exposure related to elevated levels of Pb and SO<sub>2</sub>, the promulgation of the 2008 Pb and 2010 SO<sub>2</sub> NAAQS, and the designation of the Hayden and Miami areas under the Clean Air Act (CAA) for the 2008 Pb and 2010 SO<sub>2</sub> NAAQS.<sup>5</sup>

In the May 10, 2021 proposed rule, we also described the EPA's obligation under CAA section 179(c)(1) to determine whether an area's air quality meets the 2008 Pb and 2010 SO<sub>2</sub> NAAQS, the EPA regulations establishing the specific methods and procedures to determine whether an area has attained the 2008 Pb and 2010 SO<sub>2</sub> NAAQS, and the Pb and SO<sub>2</sub> monitoring networks operated by the Arizona Department of Environmental Quality (ADEQ) in the Hayden and Miami areas.<sup>6</sup> We also documented our previous review of Arizona's monitoring networks and annual network plans, Arizona's annual certifications of ambient air monitoring data, our 2018 technical systems audit of ADEQ, and our evaluation of monitored Pb and SO<sub>2</sub> data against relevant data completeness requirements to determine validity for comparison against the 2008 Pb and 2010 SO<sub>2</sub> NAAQS, respectively.<sup>7</sup>

Under EPA regulations in 40 CFR 50.16 and in accordance with 40 CFR part 50, appendix R, the 2008 Pb NAAQS is met in an area when the design value is less than or equal to 0.15 micrograms per cubic meter (µg/m<sup>3</sup>) at each eligible monitoring site in the area. The Pb design value at each eligible monitoring site is the maximum valid 3-month arithmetic mean Pb concentration calculated over three years. Under EPA regulations in 40 CFR 50.17 and in accordance with 40 CFR part 50, appendix T, the 2010 1-hour annual SO<sub>2</sub> standard is met when the design value is less than or equal to 75 parts per billion (ppb). The SO<sub>2</sub> design value is

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<sup>4</sup> For exact descriptions of the Hayden and Miami SO<sub>2</sub> NAAs, refer to 40 CFR 81.303.

<sup>5</sup> 86 FR 24829, 24829–24830.

<sup>6</sup> 86 FR 24830–24832.

<sup>7</sup> 86 FR 24832–24833.

calculated by computing the three-year average of the annual 99<sup>th</sup> percentile daily maximum 1-hour average concentrations.<sup>8</sup>

In the proposed rule, to evaluate whether the Hayden NAA attained the 2008 Pb NAAQS by the October 3, 2019 attainment date, we determined the 2016–2018 design value at each Pb monitoring site in the Hayden NAA using monitored data from November 2015 to December 2018.<sup>9</sup> We determined that both Pb monitoring sites in the Hayden NAA produced valid design values for the 2016–2018 data period. Based on these valid design values, we found that both sites did not meet the 2008 Pb NAAQS of 0.15 µg/m<sup>3</sup> by the October 3, 2019 attainment date. The Hayden Pb 2018 annual design value site, i.e., the site with the highest design value based on monitored data from November 2015 to December 2018, is the Hillcrest site with a 2018 Pb design value of 0.31 µg/m<sup>3</sup>.

To evaluate whether the Hayden and Miami NAAs attained the 2010 SO<sub>2</sub> NAAQS by the October 4, 2018 attainment date, we determined the 2015–2017 design value at each SO<sub>2</sub> monitoring site in the Hayden and Miami NAAs using monitored data from January 2015 to December 2017.<sup>10</sup> We determined that the one SO<sub>2</sub> monitoring site in the Hayden NAA and two of the three SO<sub>2</sub> monitoring sites in the Miami NAA produced valid design values for the 2015–2017 data period. Based on these valid design values, we found that each SO<sub>2</sub> monitoring site producing a valid 2015–2017 design value in the Hayden and Miami NAAs did not meet the 2010 SO<sub>2</sub> NAAQS of 75 ppb by the October 4, 2018 attainment date. The Hayden SO<sub>2</sub> 2017 annual design value site, i.e., the site with the highest design value based on monitored data from January 2015 to December 2017, is the Hayden Old Jail site with a 2017 SO<sub>2</sub> design value of 295 ppb. The Miami SO<sub>2</sub> 2017 design value site is the Miami Jones Ranch site with a 2017 SO<sub>2</sub> design value of 221 ppb.

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<sup>8</sup> As defined in 40 CFR part 50, appendix T, section 1(c), daily maximum 1-hour values refer to the maximum 1-hour SO<sub>2</sub> concentration values measured from midnight to midnight that are used in the NAAQS computations.

<sup>9</sup> 86 FR 24829, 24833. In accordance with appendix R to 40 CFR part 50, compliance with the Pb NAAQS is determined based on data from 36 consecutive valid 3-month periods (i.e., 38 months, or a 3-year calendar period and the preceding November and December).

<sup>10</sup> 86 FR 24834.

For the Hayden Pb NAA to attain the 2008 Pb NAAQS by October 3, 2019, the 2018 Pb design value at each eligible monitoring site in the Hayden NAA must be equal to or less than  $0.15 \mu\text{g}/\text{m}^3$ . Because at least one site had a 2018 Pb design value greater than  $0.15 \mu\text{g}/\text{m}^3$ , we proposed to determine that the Hayden Pb NAA failed to attain the 2008 Pb NAAQS by the October 3, 2019 attainment date. Similarly, for the Hayden and Miami SO<sub>2</sub> NAAs to attain the 2010 SO<sub>2</sub> NAAQS by October 4, 2018, the 2017 SO<sub>2</sub> design value at each eligible monitoring site in the Hayden and Miami NAAs must be equal to or less than 75 ppb. Because at least one site in both the Hayden and Miami NAAs had a 2017 SO<sub>2</sub> design value greater than 75 ppb, we proposed to determine that the Hayden and Miami SO<sub>2</sub> NAAs failed to attain the 2010 SO<sub>2</sub> NAAQS by the October 4, 2018 attainment date. The May 10, 2021 proposed rule described the CAA requirements that would apply if the EPA were to finalize the proposed findings of failure to attain the 2008 Pb and 2010 SO<sub>2</sub> NAAQS.<sup>11</sup>

Lastly, we also described in the proposed rule that the dominant source of Pb and SO<sub>2</sub> emissions in the Hayden Pb and SO<sub>2</sub> NAAs is the Asarco LLC (“Asarco”) Hayden Smelter, and the dominant source of SO<sub>2</sub> emissions in the Miami SO<sub>2</sub> NAA is the Freeport-McMoRan Miami Inc. (FMMI) Miami Smelter. Due to the unique nature of these two facilities, which are the only batch process primary copper smelters in the country, we requested comment on what additional measures could be feasibly implemented at these facilities under CAA section 179(d)(2) in light of technological achievability, costs, and any non-air quality and other air quality-related health and environmental impacts.

## **II. Public Comments and Responses**

The May 10, 2021 proposed rule provided a 30-day public comment period that closed on June 9, 2021. During this period, seven comment letters were submitted to the EPA in response to the proposed rule. One comment letter was submitted by an anonymous commenter. This comment letter consisted of a pre-publication version of the May 10, 2021 proposed rulemaking

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<sup>11</sup> Id.

and contained no commentary on the proposed action. The six remaining comment letters were submitted by the Arizona Center for Law in the Public Interest (ACLPI), ADEQ, Asarco, FMFI, an additional representative of Asarco, and a private citizen. This section summarizes five of the six substantive comment letters submitted in response to the May 10, 2021 proposal and includes EPA's response to each of these comment letters. The additional comment letter submitted by Asarco's representative consists of more detailed technical comments concerning data quality and validity. We respond to these comments in a separate document available in the docket for this rulemaking.

*Comment 1:* ACLPI supports the EPA's proposed findings of failure to attain the 2008 Pb and 2010 SO<sub>2</sub> NAAQS in the May 10, 2021 proposed rulemaking and urges the EPA to finalize them as soon as possible so as not to delay implementation of additional control measures necessary to reach attainment of health-based standards for these areas. In response to the EPA's request for comment on additional measures that could be feasibly implemented at the Asarco Hayden Smelter under CAA section 179(d)(2), ACLPI recommends control measures focusing on sources of lead-bearing particles, including the following: (1) sulfide minerals from crushed ore or concentrate, (2) flash furnace dust, and (3) lead and zinc sulfates likely originating from converter dust. In support of its recommendations, ACLPI cites and encloses with its comment letter a report prepared by James Anderson, Professor Emeritus at the School for Engineering of Matter, Transport and Energy at Arizona State University, entitled *Assessment of the origins of lead-bearing airborne particulates at Hayden, Arizona by electron micro-analysis*.

*Response 1:* We appreciate the additional information supplied by ACLPI concerning specific sources of lead-bearing particles at the Asarco Hayden facility. We note that the submitted study was conducted in 2017, prior to full implementation of controls for the Hayden Pb NAA, which was required by 2018.<sup>12</sup> For example, Asarco was required to implement new

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<sup>12</sup> See, e.g., 83 FR 31087, 31096 (July 3, 2018), "Table 6—Control Implementation Schedule and Emission Reductions," showing implementation deadlines of July 2018 for multiple controls for the Hayden Pb NAA.

primary, secondary, and tertiary hooding systems for the converter aisle and a new ventilation system for matte tapping and slag skimming for the flash furnace by July 2018.<sup>13</sup> Accordingly, the data from the 2017 study may not accurately represent the contributions of the facility, including the converter aisle and flash furnace sources, following the implementation of these controls. Furthermore, the study does not address the technological feasibility or cost of any potential controls, which must also be considered in establishing control requirements under 179(d)(2). Therefore, we do not believe this study provides a sufficient basis for us to prescribe specific control measures for the Hayden area SIP revisions under CAA section 179(d)(2) at this time.

Additionally, we note that the EPA has proposed a residual risk and technology review (RTR) for the national emission standards for hazardous air pollutants for primary copper smelting major sources, codified at 40 CFR part 63, subpart QQQ.<sup>14</sup> This proposed rule includes reviews of health risks associated with hazardous air pollutant (HAP) emissions from primary copper smelting major sources and developments in practices, processes, and control technologies under CAA sections 112(f)(2)(A) and 112(d)(6). Based on the findings of these reviews, the EPA has proposed revised and new emissions standards for primary copper smelting major sources. The only two primary copper smelting major sources in the United States and, consequently, the only two sources that are subject to the current major source emissions standards in subpart QQQ and that would become subject to the revised standards proposed in the primary copper smelting RTR, if finalized, are the Asarco Hayden and FMMI Miami smelters. The revised and new emissions standards in the proposed RTR address anode refining furnace point source emissions of particulate matter (PM) (as a surrogate for non-mercury HAP-metals), roofline emissions of PM from anode refining furnaces and smelting furnaces, and point source emissions of mercury from dryers, converters, anode refining furnaces, and smelting

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<sup>13</sup> Id.

<sup>14</sup> 87 FR 1616 (January 11, 2022).

furnaces. In the RTR, PM is regulated as a surrogate for non-mercury metal HAP, including Pb. Given that the RTR rulemaking process for these sources is ongoing, we believe it would not be appropriate to require specific additional measures under 179(d)(2) at this time, because such measures could potentially be inconsistent with measures that may ultimately be required under the RTR rulemaking.

While we are not taking final action to prescribe additional measures for the Hayden Pb and SO<sub>2</sub> SIP revisions required under CAA section 179(d)(2) at this time, we encourage ADEQ to consider ACLPI's recommendations and the findings of the Arizona State University report enclosed in ACLPI's comment when determining appropriate measures to be included in the SIP revisions required pursuant to section 179(d)(1) as a result of this action.

*Comment 2:* ADEQ notes that the Asarco Hayden Smelter has not been operational since October 2019. ADEQ also notes that the EPA's proposed finding of failure to attain considers SO<sub>2</sub> monitoring data gathered prior to the completion of upgrades to the Asarco Hayden Smelter and FMMI Miami Smelter. ADEQ suggests that if the EPA finalizes its proposed determination in the fall of 2021, a new attainment date in late 2026 would be appropriate because it would be consistent with the timeframe established in CAA sections 172(a)(2) and 179(d)(3) and would allow ADEQ to collaborate with Asarco and FMMI to develop new attainment plans fulfilling all applicable requirements.

*Response 2:* We recognize that the Asarco Hayden Smelter has been inoperational since October 2019 and that the proposed findings of failure to attain were based on monitoring data gathered prior to the completion of upgrades to both smelters. However, CAA section 179(c)(1) requires the EPA to determine whether a nonattainment area has attained the NAAQS based on the area's air quality as of the attainment date. As described in the proposed rule, in accordance with appendix R to 40 CFR part 50, the Pb design value is determined based on monitoring data from the most recent three calendar years and two previous months. The Pb design value as of the October 3, 2019 attainment date is therefore determined based on air quality monitoring data



from November 1, 2015 to December 31, 2018. As also described in the proposed rule, in accordance with appendix T to 40 CFR part 50, the SO<sub>2</sub> design value is based on monitoring data from the most recent three calendar years. The SO<sub>2</sub> design value as of the October 4, 2018 attainment date is therefore determined based on air quality monitoring data from January 1, 2015 to December 31, 2017. The CAA does not provide the EPA with discretion to consider air quality monitoring data collected after the attainment date in making determinations of attainment or failure to attain under section 179(c)(1).

Under CAA section 179(d)(3), the new maximum attainment date for each nonattainment area is the date by which attainment can be achieved as expeditiously as practicable, but no later than five years after the EPA publishes a document in the *Federal Register* determining that the nonattainment area failed to attain the relevant NAAQS (in this case, five years from the date this final rule publishes in the *Federal Register*). To be approved by the EPA, NAA SIP submittals need to ensure that the affected NAAs reach attainment as expeditiously as practicable.

*Comment 3:* Asarco notes that the Asarco Hayden Smelter has not been operational since October 2019 and that the Pb and SO<sub>2</sub> monitoring data relied upon in the EPA's proposed finding of failure to attain almost entirely predate emissions capture and control improvements installed at the Asarco Hayden Smelter between 2018 and 2020. Asarco details these improvements and states that the EPA should defer action on the proposed finding of failure to attain to allow time for the Asarco Hayden Smelter to resume steady state operation and for monitored Pb and SO<sub>2</sub> data to demonstrate the efficacy of these improvements. Asarco states that the 179(d) proceedings triggered by the finding of failure to attain would create a legal possibility of the imposition on Asarco of hundreds of millions of dollars in additional emissions capture and control obligations and that the financial uncertainty that this would cause could very well spell the permanent end of the Hayden smelter. Asarco argues that the EPA's request for comment on additional measures that could be feasibly implemented at the Asarco Hayden

Smelter under CAA section 179(d)(2) is premature in advance of a final finding of failure to attain under CAA section 179(c) and is irrelevant to a determination of whether a finding of failure to attain is warranted. Asarco also argues that the EPA is required to undertake notice and comment rulemaking in response to a SIP revision submitted under CAA section 179(d)(1) before making a final determination of whether additional emissions capture or control requirements at the Hayden smelter are necessary.

*Response 3:* We acknowledge that the monitoring data relied upon in the proposed action largely predate the emissions capture and control improvements installed at the Asarco Hayden Smelter between 2018 and 2020 and that the smelter has not been operational since October 2019. We note, however, that SIP-approved rules R18-2-B1302 (“Limits on SO<sub>2</sub> Emissions from the Hayden Smelter”) and R18-2-B1301 (“Limits on Lead Emissions from the Hayden Smelter”) required compliance no later than July 1, 2018, and other Pb controls at the Hayden Smelter were required to be implemented by July 13, 2018.<sup>15</sup> Therefore, it appears that the upgrades and optimization projects that Asarco describes as being finalized in late 2018 through 2020 were in addition to those upgrades that were required in the SIP for the purpose of bringing the area into attainment of the SO<sub>2</sub> and Pb NAAQS. This suggests that the current SIP-approved control measures may not have been adequate to provide for attainment and that a SIP revision is therefore needed to make the additional control upgrades performed in late 2018 through 2020 (and any other measures needed to provide for attainment) permanent and enforceable.

Moreover, as discussed in our response to ADEQ’s comment in this document (response 2), the EPA is required to determine whether a nonattainment area attained the NAAQS based on the area’s air quality as of the attainment date. The CAA does not provide the EPA with discretion to consider air quality monitoring data collected after the attainment date in making determinations of attainment or failure to attain under section 179(c)(1). Therefore, even if we were to delay our determinations of whether the Hayden Pb and SO<sub>2</sub> NAAs attained the NAAQS

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<sup>15</sup> 83 FR 31087, 31096 (July 3, 2018), “Table 6–Control Implementation Schedule and Emission Reductions.”

by the respective attainment dates until the Asarco Hayden Smelter resumes steady state operation, we would not be able to consider monitoring data reflecting the improvements installed at the Asarco Hayden Smelter after those attainment dates. Such data could, however, be considered in future actions, such as a determination under the EPA's clean data policy (discussed in response 4 in this document) or a determination of whether the Hayden Pb and SO<sub>2</sub> NAAs attained the respective NAAQS by the new attainment date triggered by this finding. Furthermore, the new Pb and SO<sub>2</sub> plans that will be due within one year after publication of this action in the *Federal Register* must each include "a comprehensive, accurate, current inventory of actual emissions."<sup>16</sup> These updated inventories must necessarily reflect the controls installed at the Hayden smelter in 2018–2020 and will serve as the foundation for modeling and other analyses in the new plans.

We believe Asarco has mischaracterized the implications of the proposed findings. Contrary to Asarco's suggestion, the development of new attainment plans will not necessarily result in requirements for new emissions controls. If the new plans demonstrate that all applicable Pb and SO<sub>2</sub> attainment-related CAA requirements are satisfied with existing controls (including those installed in 2018–2020), then further controls related to attainment of the Pb and SO<sub>2</sub> NAAQS would not be required. Furthermore, as noted in the proposal, the EPA has already disapproved portions of the 2010 SO<sub>2</sub> attainment plan for the Hayden nonattainment area.<sup>17</sup> Specifically, the EPA disapproved the attainment demonstration and other elements tied to this demonstration.<sup>18</sup> Accordingly, the State would need to submit a revised attainment demonstration and related elements for the Hayden SO<sub>2</sub> NAA, and the EPA would need to propose to approve that future SIP, in order to avoid application of mandatory sanctions under CAA sections 179(a) and 179(b) and 40 CFR 52.31. As also explained in the proposal, the EPA

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<sup>16</sup> CAA section 172(c)(3).

<sup>17</sup> 85 FR 71547 (November 10, 2020).

<sup>18</sup> *Id.*

anticipates that Arizona's submission of a new, approvable SO<sub>2</sub> attainment plan in response to a final finding of failure to attain would also satisfy these existing obligations.

We disagree that our request for comment on additional measures that could be feasibly implemented at the Asarco Hayden Smelter under CAA section 179(d)(2) was premature in advance of a finding of failure to attain under CAA section 179(c)(2). Because such a finding automatically triggers a one-year deadline for submittal of a revised SIP meeting the requirements of 179(d)(2), it would be reasonable for the EPA to prescribe specific measures under 179(d)(2) in conjunction with a final action under 179(c)(2) so that the State has adequate notice of the need to include these measures while developing its SIP. However, in this particular case, we are not taking final action to prescribe additional measures for the Hayden Pb and SO<sub>2</sub> SIP revisions under CAA section 179(d)(2) at this time.

*Comment 4:* FMMI states that the monitoring data relied upon in the EPA's proposed finding of failure to attain do not reflect extensive upgrades to emission control and capture systems implemented at the FMMI Miami Smelter in January 2018. FMMI states that the EPA's proposed finding of failure to attain does not address air quality dispersion modeling or a demonstration that the control strategy in the SIP has been fully implemented. FMMI argues that a more appropriate context for the EPA's request for comment on additional measures that could be feasibly implemented at the FMMI Miami Smelter would be to recognize the following: (1) the upgrades to emission control and capture systems implemented at the FMMI Miami Smelter, (2) ADEQ's dispersion modeling demonstrating attainment of the 2010 1-hour SO<sub>2</sub> NAAQS, and (3) subsequent monitoring data indicating that emission reductions are providing for attainment of the 2010 1-hour SO<sub>2</sub> NAAQS. FMMI cites the EPA's "Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions" ("SO<sub>2</sub> SIP Guidance"),<sup>19</sup> which states:

The EPA believes that, where a control strategy has recently taken effect and the state can determine based on recent monitoring data or other relevant information

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<sup>19</sup> Memorandum dated April 23, 2014, from Stephen D. Page, Director, Office of Air Quality Planning and Standards, EPA, to EPA Regional Air Directors, Regions 1-10, Subject: "Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions," 11.

that the control strategy will result in attainment once 3 years of data that reflect those controls are available, the required plan revisions can be accomplished in a very streamlined manner. The EPA expects that the submittal to the EPA could simply provide a determination that: (1) all monitors in the affected area have at least 1 calendar year of clean air quality data, (2) the approved SIP has been fully implemented for the area, and (3) emission sources have complied with their SIP requirements.

FMMI notes that, despite implementation of the required capture and control upgrades by January 2018, “there were still several instances of recorded daily maximum 1-hour SO<sub>2</sub> concentrations above the standard in calendar year 2018.” FMMI explains that, in response to these exceedances, it “implemented several measures to improve capture and minimize fugitive SO<sub>2</sub> emissions.” FMMI further states that the two monitors in the Miami NAA recorded a total of three exceedances of the 1-hour SO<sub>2</sub> NAAQS in 2020, all of which “were attributed to a specific event or issue at the Miami Smelter that was subsequently resolved,” and that since January 1, 2021, there have been no exceedances of the 1-hour SO<sub>2</sub> NAAQS recorded at either of these monitors. On this basis, FMMI argues that, because (1) the monitors in the Miami SO<sub>2</sub> NAA have at least one calendar year of clean data, (2) the approved Miami SO<sub>2</sub> NAA SIP has been fully implemented, and (3) the FMMI Miami Smelter is in compliance with its source-specific SIP requirements, the SIP revision required under CAA section 179(d)(1) following a finding of failure to attain under section 179(c)(2) need only affirm the previously approved SIP and establish a new attainment date that reflects three full years of implementation. FMMI also states that certain SIP requirements, including contingency measures, can be suspended if the monitors in the Miami SO<sub>2</sub> NAA have at least one calendar year of data indicating that the area is attaining the standard.

*Response 4:* As discussed in response 2 of this document, the EPA is required to determine whether a nonattainment area attained the NAAQS based on the area's air quality as of the attainment date, and the CAA does not provide the EPA with discretion to consider air quality monitoring data collected after the attainment date in making determinations of attainment or failure to attain under section 179(c)(1). We acknowledge that the monitoring data

relied upon in the proposed action therefore do not fully reflect upgrades to emission control and capture systems implemented at the FMMI Miami Smelter as of January 2018 because some of those upgrades occurred after the area's attainment date. However, we note that the construction schedule set forth in the approved implementation plan indicated that FMMI planned to complete many of the required upgrades in 2016–2017, so the monitoring data in 2016–2017 would have reflected some of these upgrades.<sup>20</sup>

While FMMI states that the EPA's proposed finding of failure to attain does not address air quality dispersion modeling or a demonstration that the control strategy in the SIP has been fully implemented, FMMI also acknowledges that monitoring data from January 1, 2015 to December 31, 2017 do not demonstrate attainment of the SO<sub>2</sub> NAAQS in the Miami NAA by the attainment date. As described in the EPA's SO<sub>2</sub> SIP Guidance, we are not able to make a determination of attainment for an area if the monitors in the area do not yield a design value that meets the NAAQS prior to the applicable attainment date. In the proposed rule, we found that two regulatory air monitors in the Miami NAA produced complete, valid 1-hour SO<sub>2</sub> design values for the 2015–2017 data period. Because complete and valid monitoring data were available to determine that the Miami NAA failed to attain the SO<sub>2</sub> NAAQS by the attainment date, we do not find it necessary or appropriate to consider air quality dispersion modeling or a demonstration that the control strategy in the SIP has been fully implemented in our attainment determination. We acknowledge FMMI's comment that recognizing upgrades to the smelter, dispersion modeling demonstrating attainment, and monitoring data demonstrating progress toward attainment would provide a more appropriate context for our request for comment on additional measures that could be feasibly implemented at the FMMI Miami Smelter. We note that we are not taking final action to prescribe additional measures for the Miami SO<sub>2</sub> SIP revision under CAA section 179(d)(2) at this time.

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<sup>20</sup> "Arizona State Implementation Plan Revision: Miami Sulfur Dioxide Nonattainment Area for the 2010 SO<sub>2</sub> NAAQS," 84 (March 8, 2017), Table 5-4.

As noted by FMMI, the SO<sub>2</sub> SIP Guidance indicates that, following a finding of failure to attain, in appropriate circumstances the EPA may approve a revised plan that affirms the previously approved control strategy but establishes a new attainment date. In particular, the SO<sub>2</sub> SIP Guidance indicates that this approach may be appropriate if the state can determine, based on recent monitoring data or other relevant information, that the control strategy in the existing SIP will result in attainment once three years of data reflecting those controls are available.<sup>21</sup> We recognize the progress that the Miami SO<sub>2</sub> NAA has made toward attainment of the 2010 SO<sub>2</sub> NAAQS since emissions control and capture improvements were implemented at the FMMI Miami Smelter in January 2018. However, as FMMI acknowledges in its comment, monitors in the Miami area recorded multiple exceedances of the SO<sub>2</sub> NAAQS in 2018–2020, even after full implementation of the improvements required under the SIP. We appreciate that, since 2018, FMMI has implemented additional improvements to emissions capture at the Miami Smelter to address those exceedances. However, because those improvements were implemented after the attainment date, they were evidently not required under the existing SIP. This suggests that the control strategy in the existing SIP is, in fact, not sufficient to provide for attainment of the NAAQS and that substantive revisions to the requirements of the SIP may be needed.

Finally, we do not agree with the commenter's assertion that certain SIP requirements, including contingency measures, can be suspended based on one calendar year of monitoring data indicating no hourly exceedances of the NAAQS level. The commenter appears to be referring to the EPA's clean data policy, which is discussed in the SO<sub>2</sub> SIP Guidance.<sup>22</sup> However, contrary to the commenter's suggestion, a single year of clean monitoring data is not a sufficient basis for the EPA to suspend attainment-related SIP requirements under the SO<sub>2</sub> clean data policy. Rather, ADEQ would need to demonstrate that the area has three consecutive calendar years of air quality monitoring data which show that the area is meeting the standard

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<sup>21</sup> SO<sub>2</sub> SIP Guidance, 11.

<sup>22</sup> Id. at 51–60

and provide either (1) modeling of the most recent three years of actual emissions for the area or (2) a demonstration that the affected monitor(s) is located in the area of maximum concentration.<sup>23</sup> We also note that a clean data finding would only suspend the requirements for the State to submit SIP revisions to address certain attainment-related requirements. Such a finding would not affect existing requirements that already apply under the SIP. Such requirements can only be altered by a SIP revision meeting the requirements of CAA section 110(l). Therefore, contrary to the commenter's suggestion, a clean data finding would not alter the States' or sources' ongoing obligations to implement the contingency measures in the previously approved SIP for the Miami NAA that will be triggered by the findings in this action.

*Comment 5:* One commenter, a private citizen, argues that, due to the unique nature of the Asarco Hayden Smelter and FMMI Miami Smelter, the time allotted for each smelter to retrofit its equipment before the attainment date is capricious and arbitrary. The commenter states that the EPA's finding of failure to attain should consider improvements made at both smelters, the challenges posed to both smelters as a result of the EPA's tightened Pb and SO<sub>2</sub> NAAQS, and the short time frame allotted for both smelters to retrofit their equipment before the applicable attainment dates. Finally, citing CAA sections 110 and 172, the commenter argues that the EPA should seek revisions to the SIP and extend the attainment dates in order to prove the retrofitted smelters have fulfilled requirements under 172(c).<sup>24</sup>

*Response 5:* We disagree that the time allotted for each smelter to retrofit its equipment before the attainment date is capricious and arbitrary. CAA section 192(a) provides that the attainment date for newly designated Pb and SO<sub>2</sub> nonattainment areas is "as expeditiously as practicable but no later than 5 years from the date of the nonattainment designation."<sup>25</sup> Thus, the October 4, 2018 attainment date for the Hayden and Miami SO<sub>2</sub> NAAs and the October 3, 2019

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<sup>23</sup> Id. at 57–58.

<sup>24</sup> We interpret the commenter's reference to "42 U.S.C. § 7410 (h)(k)(j) and U.S.C § 7502 (2)(a)" to refer to CAA sections 110(h), (j), and (k) (42 U.S.C. 7410(h), (j), and (k)), and 172(a)(2) (42 U.S.C. 7502(a)(2)).

<sup>25</sup> Pursuant to CAA sections 172(a)(2)(D) and 192(a), the attainment date extension provision under section 172(a)(2)(A) does not apply to the Pb or SO<sub>2</sub> NAAQS.



attainment date for Hayden Pb NAA were the latest possible dates permitted by statute. While we acknowledge that the monitoring data relied upon in the proposed action do not reflect all of the emissions control and capture improvements that have been made to date at the Hayden Asarco Smelter and FMMI Miami Smelter, as discussed in response 2 of this document, the EPA is required to determine whether a nonattainment area attained the NAAQS based on the area's air quality as of the attainment date. The EPA does not have the discretion to consider air quality monitoring data collected after the attainment date in making determinations of attainment or failure to attain under CAA section 179(c)(1).

We do not agree with the commenter's suggestion that we should take action under CAA sections 110(h), (j) or (k) in relation to the Hayden Pb, Hayden SO<sub>2</sub>, or Miami SO<sub>2</sub> NAAs. CAA subsections 110(h), 42 U.S.C. 7410(h), ("Publication of comprehensive document for each State setting forth requirements of applicable implementation plan") and 110(j), 42 U.S.C. 7410(j) ("Technological systems of continuous emission reduction on new or modified stationary sources; compliance with performance standards") have no particular relevance to attainment plans, and we believe the references to these sections may have been in error. If the commenter is suggesting that the EPA seek revisions to the SIP and extend attainment dates under its authority to issue a SIP call under CAA section 110(k)(5), we do not believe such a SIP call is necessary or appropriate for the Hayden Pb, Hayden SO<sub>2</sub>, or Miami SO<sub>2</sub> NAAs at this time. The findings in this action trigger new attainment dates<sup>26</sup> and requirements for SIP revisions under CAA section 179(d), and the newly required SIP revisions must meet the requirements of CAA sections 110 and 172, including the provisions of section 172(c), 42 U.S.C. 7502(c) referenced by the commenter.<sup>27</sup>

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<sup>26</sup> As noted in the proposal, under CAA section 179(d)(3), the new attainment date for each nonattainment area is the date by which attainment can be achieved as expeditiously as practicable, but no later than five years after the EPA publishes a final action in the *Federal Register* determining that the nonattainment area failed to attain the applicable Pb or SO<sub>2</sub> standard.

<sup>27</sup> CAA section 179(d)(2).

### III. Environmental Justice Considerations

Executive Order 12898 (59 FR 7629, February 16, 1994) requires that Federal agencies, to the greatest extent practicable and permitted by law, identify and address disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations. Additionally, Executive Order 13985 (86 FR 7009, January 25, 2021) directs Federal Government agencies to assess whether, and to what extent, their programs and policies perpetuate systemic barriers to opportunities and benefits for people of color and other underserved groups, and Executive Order 14008 (86 FR 7619, February 1, 2021) directs Federal agencies to develop programs, policies, and activities to address the disproportionate health, environmental, economic, and climate impacts on disadvantaged communities. To identify environmental burdens and susceptible populations in underserved communities in the Hayden Pb, Hayden SO<sub>2</sub>, and Miami SO<sub>2</sub> NAAs, and to examine the implications of the proposed findings of failure to attain the 2008 Pb and 2010 SO<sub>2</sub> NAAQS on these communities, we performed a screening-level analysis using the EPA's environmental justice (EJ) screening and mapping tool ("EJSCREEN").<sup>28</sup> Our screening-level analysis indicates that communities in the NAAs affected by this action, particularly in the neighborhoods surrounding the Asarco Hayden and FMMI Miami smelters, score highly compared to the national average for the EJSCREEN "Demographic Index," which is the average of an area's percent minority and percent low income populations, i.e., the two demographic indicators explicitly named in Executive Order 12898.<sup>29</sup> These neighborhoods also score highly compared to the national average for the

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<sup>28</sup> EJSCREEN provides a nationally consistent dataset and approach for combining environmental and demographic indicators. EJSCREEN is available at <https://www.epa.gov/ejscreen/what-ejscreen>. The EPA used EJSCREEN to obtain environmental and demographic indicators representing the Hayden and Miami nonattainment areas as well as for buffer areas of approximately 1-, 2-, and 3-mile radii centered around the Asarco Hayden and FMMI Miami smelters. These indicators are included in the file titled "EJSCREEN summary.xlsx" available in the rulemaking docket for this action.

<sup>29</sup> EJSCREEN reports environmental indicators (e.g., air toxics cancer risk, Pb paint exposure, and traffic proximity and volume) and demographic indicators (e.g., people of color, low income, and linguistically isolated populations). Depending on the indicator, a community that scores highly for an indicator may have a higher percentage of its population within a demographic group or a higher average exposure or proximity to an environmental health hazard compared to the state, region, or national average. EJSCREEN also reports EJ indexes, which are combinations of a single environmental indicator with the EJSCREEN Demographic Index. For additional information about

“population with less than high school education” and “population over age 64” indicators.

Additionally, these neighborhoods score highly compared to the national average for numerous EJ Index indicators, including the Pb paint EJ Index and wastewater discharge EJ Index.

As discussed in the EPA’s EJ technical guidance, people of color and low-income populations often experience greater exposure and disease burdens than the general population, which can increase their susceptibility to adverse health effects from environmental stressors.<sup>30</sup> Underserved communities can also experience reduced access to health care, nutritional, and fitness resources, further increasing their susceptibility. In addition to the demographic and environmental indicators identified in our screening level analysis, the proximity of underserved communities to the Asarco Hayden and FMMI Miami smelters (and exposure to Pb and SO<sub>2</sub> emissions from these facilities) contribute to the potential EJ concerns faced by communities in the affected nonattainment areas.

This final action triggers the implementation of contingency measures and requires the State of Arizona to develop updated SIP revisions providing for attainment of the 2008 Pb NAAQS in Hayden and attainment of the 2010 SO<sub>2</sub> NAAQS in Hayden and Miami. The implementation of contingency measures and development of required SIP revisions will result in air quality improvements and human health benefits for Hayden- and Miami-area residents, including those in underserved communities. Conversely, failure to make the determinations in this final action could inhibit or delay the attainment of the 2008 Pb and 2010 SO<sub>2</sub> NAAQS in these areas, perpetuating the EJ concerns potentially faced by communities in these areas. Thus, we believe that finalizing our proposed action will help to reduce disproportionate health, environmental, economic, and climate impacts on disadvantaged communities in the Hayden and Miami areas and that this action will not have disproportionately high and adverse human health

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environmental and demographic indicators and EJ indexes reported by EJSCREEN, see EPA, “EJSCREEN Environmental Justice Mapping and Screening Tool – EJSCREEN Technical Documentation,” section 2 (September 2019).

<sup>30</sup> EPA, “Technical Guidance for Assessing Environmental Justice in Regulatory Analysis,” section 4 (June 2016).

or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898.

#### **IV. Final Action**

Under CAA section 179(c)(1), the EPA is taking final action to determine that the Hayden Pb NAA failed to attain the 2008 Pb primary and secondary NAAQS by the applicable attainment date of October 3, 2019. The EPA is also taking final action to determine that the Hayden and Miami SO<sub>2</sub> NAAs failed to attain the 2010 1-hour primary SO<sub>2</sub> NAAQS by the applicable attainment date of October 4, 2018. As a result of these determinations, the State of Arizona is required under CAA section 179(d) to submit revisions to the Arizona SIP for the Hayden Pb, Hayden SO<sub>2</sub>, and Miami SO<sub>2</sub> NAAs that, among other elements, provide for attainment of the respective standards as expeditiously as practicable but no later than January 31, 2027. At this time, we are not prescribing additional measures for the Pb and SO<sub>2</sub> SIP revisions under CAA section 179(d)(2). The SIP revisions required under CAA section 179(d) are due for submittal to the EPA by January 31, 2023. This final action also triggers the implementation of contingency measures adopted in these areas under CAA section 172(c)(9).

#### **V. Statutory and Executive Order Reviews**

Additional information about these statutes and Executive orders can be found at <https://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

*A. Executive Order 12866: Regulatory Planning and Review, and Executive Order 13563: Improving Regulation and Regulatory Review*

This action is not a significant regulatory action and therefore was not submitted to the Office of Management and Budget for review.

*B. Paperwork Reduction Act (PRA)*

This action does not impose an information collection burden under the provisions of the PRA because it does not contain any information collection activities.

*C. Regulatory Flexibility Act (RFA)*

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. This final action requires the State to adopt and submit SIP revisions to satisfy CAA requirements and does not itself directly regulate any small entities.

*D. Unfunded Mandates Reform Act (UMRA)*

This action does not contain any unfunded mandate of \$100 million or more, as described in UMRA (2 U.S.C. 1531–1538) and does not significantly or uniquely affect small governments. This action itself imposes no enforceable duty on any state, local, or tribal governments, or the private sector. This action determines that the Hayden Pb NAA and the Hayden and Miami SO<sub>2</sub> NAAs failed to attain the NAAQS by the applicable attainment dates and triggers existing statutory timeframes for the State to submit SIP revisions. Such a determination in and of itself does not impose any Federal intergovernmental mandate.

*E. Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the National Government and the states, or on the distribution of power and responsibilities among the various levels of government.

*F. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments*

This action does not have tribal implications as specified in Executive Order 13175. The finding of failure to attain the Pb and SO<sub>2</sub> NAAQS does not apply to tribal areas, and the rule will not impose a burden on Indian reservation lands or other areas where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction within the Hayden Pb, Hayden SO<sub>2</sub> and Miami SO<sub>2</sub> nonattainment areas. Thus, this rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175. Nonetheless, the EPA notified the San Carlos Apache Tribe of the San Carlos Reservation, which borders the eastern boundary of the Hayden Pb and Hayden SO<sub>2</sub> NAAs, of this action.

*G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks*

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2-202 of the Executive order. This action is not subject to Executive Order 13045 because the effect of this action is to trigger additional planning requirements under the CAA. This action does not establish an environmental standard intended to mitigate health or safety risks.

*H. Executive Order 13211, Actions That Significantly Affect Energy Supply, Distribution, or Use*

This rule is not subject to Executive Order 13211 because it is not a significant regulatory action under Executive Order 12866.

*I. National Technology Transfer and Advancement Act (NTTAA)*

This rulemaking does not involve technical standards.

*J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898. The documentation for this decision is contained in section III of this document. The docket for this rulemaking action includes a summary of environmental justice indicators for communities in the Hayden and Miami areas obtained using the EPA’s EJSCREEN tool.

*K. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The

EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the *Federal Register*. A major rule cannot take effect until 60 days after it is published in the *Federal Register*. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

*L. Petitions for Judicial Review*

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements (see section 307(b)(2)).

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Pollution, Sulfur dioxide.

**Authority:** 42 U.S.C. 7401 *et seq.*

Dated: January 21, 2022.

Martha Guzman Aceves,  
*Regional Administrator,*  
*Region IX.*

For the reasons stated in the preamble, the EPA amends chapter I, title 40 of the Code of Federal Regulations as follows:

## **PART 52 – APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS**

1. The authority citation for part 52 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq.*

### **Subpart D – Arizona**

2. Section 52.125 is amended by adding paragraph (h) to read as follows:

#### **§ 52.125 Control strategy and regulations: Sulfur Oxides**

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(h) Effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*], the EPA has determined that the Hayden and Miami nonattainment areas failed to attain the 2010 1-hour primary sulfur dioxide (SO<sub>2</sub>) national ambient air quality standards (NAAQS) by the applicable attainment date of October 4, 2018. This determination triggers the requirements of CAA section 179(d) for the State of Arizona to submit a revision to the Arizona SIP for the Hayden and Miami nonattainment areas to the EPA by January 31, 2023. The SIP revision must, among other elements, provide for attainment of the 1-hour primary SO<sub>2</sub> NAAQS in the Hayden and Miami SO<sub>2</sub> NAAs as expeditiously as practicable but no later than January 31, 2027.

3. Section 52.127 is added to read as follows:

#### **§ 52.127 Control strategy and regulations: Lead.**



(a) Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**, the EPA has determined that the Hayden nonattainment area failed to attain the 2008 primary and secondary lead (Pb) national ambient air quality standards (NAAQS) by the applicable attainment date of October 3, 2019. This determination triggers the requirements of CAA section 179(d) for the State of Arizona to submit a revision to the Arizona SIP for the Hayden nonattainment area to the EPA by January 31, 2023. The SIP revision must, among other elements, provide for attainment of the 2008 Pb NAAQS in the Hayden Pb NAA as expeditiously as practicable but no later than January 31, 2027.

(b) [Reserved]

[FR Doc. 2022-01595 Filed: 1/28/2022 8:45 am; Publication Date: 1/31/2022]